

## **REMARKS**

Claims 1, 3, 7, and 17 have been amended. Claims 1, 3, 5-32 are pending in the present application. Claims 1, 3, 7, 12-20, 22, 23, 25-28, and 30 have been amended to more clearly define the subject matter of the present application.

### Claim rejection under 35 USC §112:

The Examiner rejected claims 1, 3, 5-32 under 35 U.S.C. 112, second paragraph, as being indefinite. Applicant amended claims 1, 3, 7, and 17 according to the proposal of the Examiner. Therefore, Applicant believes that the §112 rejection is now overcome.

### Claim rejection under 35 USC §103:

Claim 1, 3, 5-11, 15-29, 31-32 have been rejected under 35 U.S.C. 103, as being unpatentable over Katoh et al.(US 5,402,641) in view of Cornelison et al. (US 5,240,682). The Examiner bases his rejection on the assumption that Katoh discloses allegedly the essentially same invention as of present claim 1, but fails to disclose a metal support member. Applicant respectfully disagrees. The present independent claim 1 includes limitations neither disclosed nor suggested by Katoh. The Examiner correctly stated that the means for controlling the temperature according to the present independent claim 1 of the application include electric heating. However, Katoh does neither disclose nor suggest to use a heating element. The cited paragraphs, col. 2, lns. 1-37, col. 4, lns. 29-56, and col. 5, lns. 6+ do not mention heating at all. All Katoh proposes is to place two temperature sensors 10, 10A at the upstream and downstream path of the NOx absorbent 6. Control unit 8 receives those temperature values and controls merely an air-fuel ratio by controlling an injection amount of fuel. See col. 5, lns. 6-26 of Katoh. Elements 12, 14, and 18 are further sensors to provide additional data to the control unit 8. However, a heating element is neither shown nor suggested. All flow charts according to Fig. 5-17 merely include steps to determine an exhaust gas temperature but do not include the step of heating a NOx absorbent. Hence, Katoh uses a completely different approach than the present invention as the control unit does not regulate the temperature of the NOx absorbent. Therefore, contrary to the conclusion of the Examiner, Katoh fails to disclose or suggest the main

limitations of the heating element and the control unit controlling the heating element of the present independent claim 1.

Furthermore, the present independent claim includes a specific limitation for the oxide gas absorber. The oxide gas absorber is defined by a metal support member and an absorption member arranged on the surface of the support member. The metal support member can be, for example, a metal foil as disclosed on page 9, lns. 4-12. The absorption member can be a second foil arranged on top of the first foil. However, the second foil must have a greater surface than the first foil. This requirement can be fulfilled, for example, by a corrugated second foil which is welded or soldered to the first foil at its corrugation crests. Thus, the absorber comprises a heating element (support member) which is in direct contact with the absorber member. This arrangement provides for effective and fast heating.

Katoh does neither disclose nor mention a gas absorber as claimed. Cornelison does also neither disclose nor mention a gas absorber having such a two part structure. Cornelison discloses merely single absorption layers which are folded at their ends 16 and 18 to provide a reinforcement. However, the structure remains as a single layer (corrugated foil elements 10). Thus, the current has to flow through the corrugated foil elements. Contrary to the present invention, there is no heating member coupled with the absorption member. According to Cornelison, the absorption layer is used as a heating member itself. A separate heating member, however, as required by the present claim can provide a much more efficient heating because it may have a much lower resistance. Thus, higher temperatures can be achieved. Furthermore, the two layer structure according to the present invention also provides a much more rigid structure.

Therefore, a combination of Katoh and Cornelison does not render the present invention obvious.

Claim 1, 3, 5-11, 15-29, 31-32 have been rejected under 35 U.S.C. 103, as being unpatentable over Araki et al. (US 5,404,719) in view of Katoh et al. (US 5,402,641) and Cornelison et al. (US 5,240,682). The Examiner bases his rejection on the assumption that Araki discloses allegedly the essentially same invention as of present claim 1, but fails to disclose the control means during regeneration. Applicant respectfully disagrees. The present independent

claim 1 includes limitations neither disclosed nor suggested by Araki. Araki does, as discussed above, neither disclose nor mention a gas absorber having a two part structure. Araki does not specifically disclose the use of a heating element in the figures. However, Araki discloses in column 5, lns. 53-56 that a electric heater can be arranged in the interior of the casing. Araki is nevertheless silent about how this heater is configured and how such a heater is placed within the absorber. Therefore, Araki does not introduce anything beyond Cornelison who already teaches to use a heater within a gas absorber. All the arguments presented above with respect to Cornelison, therefore, also apply for this rejection.

Therefore, a combination of Katoh, Araki and Cornelison does not render the present invention obvious.

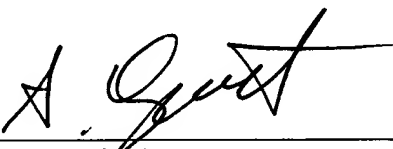
The dependent claims 2, and 5-32 are dependent on independent claim 1 and include all the limitations of claim 1. Therefore, these claims are patentable at least to the extent of claim 1.

#### **CONCLUSION**

The application as defined in the pending claims is patentable under 35 U.S.C. §112 and §103 in view of the cited prior art. Therefore, applicants respectfully request withdrawal of the rejection and allowance of all pending claims.

Applicants do not believe that any other fees are due at this time; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to this document, the Commissioner is authorized to deduct the fees from Deposit Account No. 02-0383, (*formerly Baker & Botts, L.L.P.*) Order Number 070255.0514.

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**Expires: June 30, 2004**

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**Harry I. Moatz  
Director of Enrollment and Discipline**